Keeler

English

INDIRECT POWER SUPPLY

Instructions

PLEASE READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY

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Introduction

Thank you for purchasing a Keeler Indirect Ophthalmoscope Power Supply. We have taken the greatest care in the design, development and manufacture of these devices to ensure that they give you many years of trouble-free service. However, it is important that you read the descriptions, installation and operating instructions contained in this book carefully prior to installing or using your new Indirect Ophthalmoscope Power Supply.

If you are in doubt about any aspect of these instructions, we recommend that you contact a qualified electrical technician, your nearest authorised Keeler Distributor, or Keeler direct.

Indirect Ophthalmoscope Power Supply Units are for indoor use only. Where appropriate, the plug-in power module of the power supply unit is designed to be connected directly to a suitable wall socket. It is important therefore that a socket is selected where the power module will not be vulnerable to damage from passing trolleys, etc and the low voltage interconnecting leads should be kept away from gangways and passageways where persons would be expected to pass.

Do not use in the presence of fluids or flammable anaesthetics.

As part of our policy for continued product development we reserve the right to amend specifications at any time without prior notice.

Preparing your Indirect Ophthalmoscope Power Supply

1.1 Contents Check

Before attempting to use your Vantage, All Pupil, Fison or Spectacle Indirect Ophthalmoscope (S.I.O.) Power Supply Unit, confirm against the contents check diagram (Fig. 1) that all the components have been correctly supplied.

SYSTEM / COMPONENT	Power Supply Units Only		Indirect Ophthalmoscope Kits						
			All Pupil (API) & Fison		S.I.O		Vantage		
	All Pupil & Fison	S.I.O	API KIT A & B	API KIT C & D FISON	KIT A & B	KIT C	KIT A	KIT B	KIT C
Power Module	1	1	1	1	1	1	1	1	1
Wall Screw	3		3	2			3		3
Wall Plug	3		3	2			3		3
Cradle			1	1			1		1
Cradle Securing Screw			2	2			2		2
Cradle Spacers			2	2			2		2
Battery Hanger			1				1		1
Rech. Battery			1		1		1		
Battery Cable			1		1		1		
Wall Pad	1		1	1			1		1
Accessory Box			1	1 Fison A only			1		1
Hexagonal Allen Key	1		1	1			1		1

Fig 1 **Contents Check Diagram**

Note: The contents check diagram does not include Indirect Ophthalmoscope components, so instructions supplied with those instruments should be referred to. The Spectacle Indirect Ophthalmoscope is designed for desk top use only and therefore does not include any components for wall mounting.

Preparing your Indirect Ophthalmoscope Power Supply

1.2 Electrical Check

Before connecting the power unit to the electricity supply, check that the input voltage on the data rating label corresponds with that of your local supply voltage. For full electrical information and circuit diagrams, refer to Section 5 - Technical Specification.

1.3 Fitting Instructions for Desk-Top Use

Keeler Indirect Ophthalmoscope Power Supply systems are supplied ready assembled for desk-top use. Place the unit in the desired position and plug the power module into a suitable power outlet/wall socket. Your power supply unit is now ready to accept Keeler Indirect Ophthalmoscopes. Refer to section 2 - Standard Operating Instructions.

1.4 Fitting Instructions for In Case Use

Keeler Indirect Ophthalmoscopes may be operated direct from the case for short periods by plugging the power module into a suitable nearby power outlet/wall socket.

CAUTION

Care should be taken not to close the case lid when the instrument is being used in this way as this may cause damage to the connecting cables.

Alternatively, the Indirect Ophthalmoscope Power Supply may be removed from the case and operated from the desk or wall mounted (see 2.1)

1.5 Fitting Instructions for Wall Mounted Systems

Important Notice: Keeler Indirect Ophthalmoscope Power Supplies are designed to be fitted to all walls. The wall fittings supplied are suitable for mounting your power supply to walls constructed of sound brick, breeze block, concrete

or plasterboard. If required alternative fittings suitable for mounting your power supply on walls constructed from materials other than those mentioned above should be obtained. If in doubt, consult a qualified builder for advice. Keeler Limited cannot accept any responsibility for any damage or injury sustained by incorrect assembly, wall mounting or use of wall mounted power supplies.

The Keeler transformer unit must be disconnected from the power supply before commencing to wall mount the unit.

a) To wall mount your Keeler Power Supply, select a convenient position on the wall ensuring that there is a suitable power outlet/wall socket for the plug-in power module within reach of the interconnecting cord. Also, make sure that there are no water or gas pipes or electrical cables buried in the wall.

b) Refer to the chart over the page (Fig.2) and identify your power supply unit. Remove the module(s) shown from the 'L' shaped rail to expose the wall mounting fixing holes. This canbe done by first removing the plastic screw hole covers and unscrewing the retaining screws using the hexagonal Allen key provided. Keep the retaining screws safe for later reassembly.

Preparing your Indirect Ophthalmoscope Power Supply

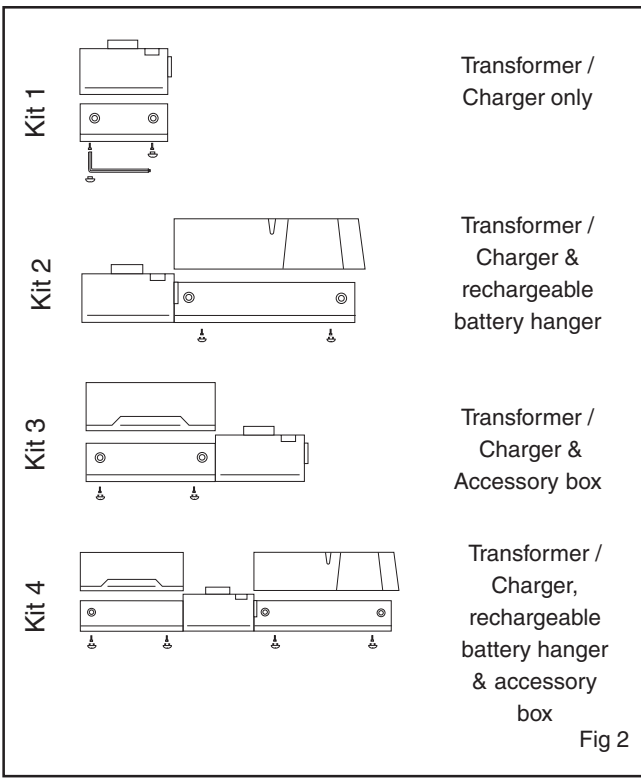

Kit 1
Transformer / Charger only
Kit 2
Transformer / Charger & rechargeable battery hanger
Kit 3
Transformer / Charger & Accessory box
Kit 4
Transformer / Charger, rechargeable battery hanger & accessory box

Fig 2

c) Mark position of fixing holes by using the wall rail supplied as a template. Check marks are horizontal with a spirit level. (Fig 3)

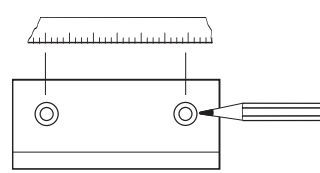


Fig 3

Preparing your Indirect Ophthalmoscope Power Supply

d) Drill holes to a minimum depth of 50mm (2") with a 6mm (¼") diameter masonry drill. (Fig 4)

Always wear eye protection when using a drill.

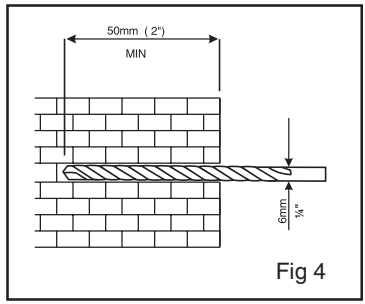


Fig 4

e) The wall plugs provided are suitable for solid or plasterboard walls. Push or lightly tap the plugs until they are flush with the wall (Fig 5).

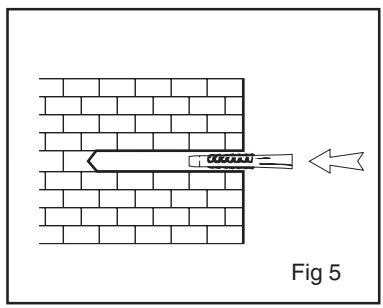


Fig 5

f) Screw wall rail securely to wall using screws provided. (Fig 6)

g) Reassemble the unit(s) to the wall rail with the screws previously removed using the hexagonal Allen key.

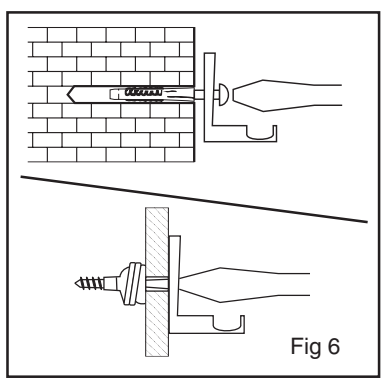


Fig 6

Preparing your Indirect Ophthalmoscope Power Supply

h) Replace the plastic screw hole covers under the wall rail.

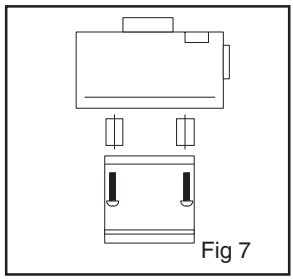


Fig 7

i) Secure the cradle to the power unit using the screws and spacers provided. (Fig 7)

j) The power module for Fison Ophthalmoscopes and in some markets for the All-Pupil and Vantage Ophthalmoscopes may also be fitted to the wall. Follow the instructions in section 1.5and secure the unit with the mounting tag. (Fig 8)

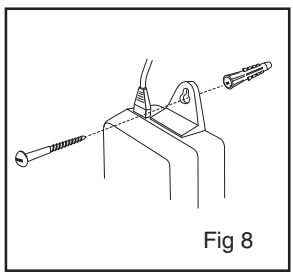


Fig 8

k) Place the Indirect Ophthalmoscope onto the cradle and stick the wall pad provided below the power unit, to protect the optics from knocking against the wall.

l) If you have a rechargeable battery pack hanger then place your battery onto the hanger using the belt clip to the rear of the battery pack. (Fig.9)

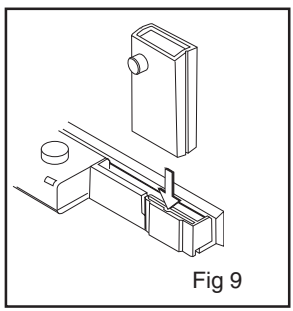


Fig 9

m) The power system is now ready to use. Refer to section 2 - Standard Operating Instruc-

tions.

2.1 Connecting your instrument to your wall mounted power supply

Connect the Indirect Ophthalmoscope by inserting the multi-pin plug running from your Indirect Ophthalmoscope into the

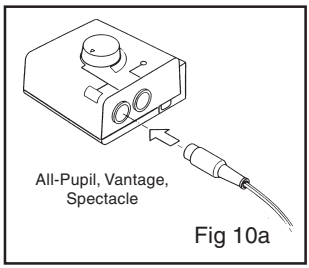


Fig 10a

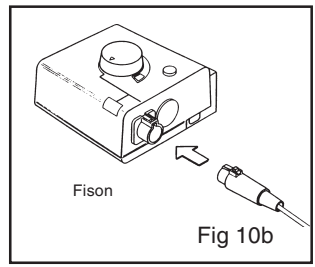


Fig 10b

socket located on the side of your unit.

2.2 Connecting your Rechargeable battery for charging
(All Pupil, Vantage and Spectacle Indirect Ophthalmoscope only)

In order to charge the rechargeable battery connect the battery charging cable between the battery and the right socket located on the right hand side of the unit. (Fig.11). Ensure the battery is turned OFF. It will now charge. Allow 16 hours to fully charge the battery from fully discharged.

IMPORTANT

For safety reasons, rechargeable batteries are supplied in an uncharged condition. In order to obtain their full charge capacity, new batteries should be conditioned by being charged for

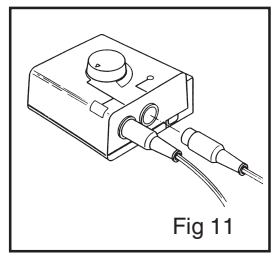


Fig 11

a continuous period of 24 hours.
The full charge capacity will be obtained after 3 or 4 full charge/discharge cycles. This should also be carried out when batteries have been stored for long periods in a fully discharged state. After repeated charge/discharge cycles it is possible for a reduction in battery capacity *to become apparent. The normal capacity can be restored by a period of extended charge (24 hours) as described for new batteries above.*

2.3 Connecting your rechargeable battery for use

The Power Supply is designed to charge the Keeler Porta-Power 1.2Ah. 6V Ni Cad battery pack; ***and should never be used with Non-Rechargeable batteries.***
To use your battery pack unplug the charging cable at the battery end. Unplug the Indirect Ophthalmoscope from the power unit and plug it into the battery. (Fig 12) A fully charged battery will provide approximately 40 minutes of full illumination. Longer periods of use may be expected if the power and illumination are reduced.

2.4 Usage Guide

a) Desk-top or Case System

Turning the illumination control on the top of the power supply clockwise switches the system ***on***, illuminates the light emitting diode (LED), and then controls the brightness of the instru-

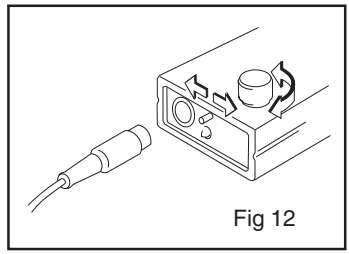


Fig 12

ment illumination.

When not in use the illumination
control should be turned fully anti-clockwise until a click is heard and the green LED is no longer illuminated. In this position the power supply is ***off*** (Fig 13).

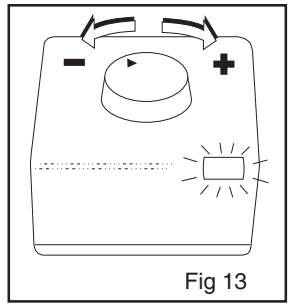


Fig 13

b) Wall Mounted System

When not in use your instrument should rest in the cradle of your power supply with optics downwards (Fig.14). In this position the LED and power is off. When the control on top of the unit is turned on, removing your instrument from the cradle powers the indirect and the LED illuminate indicating that your instrument is now ready for use (Fig 15). Brightness of illumination is adjusted using the control on top of the power supply.

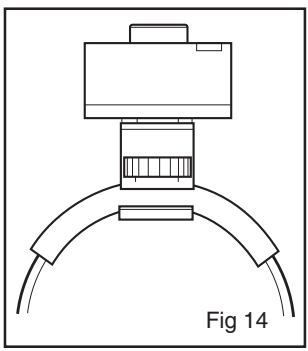


Fig 14

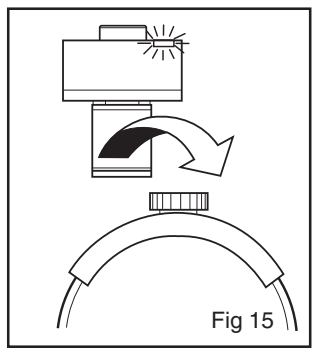


Fig 15

Care and Maintenance

Leaving the illumination on for long periods when not in use reduces the remaining life of the Halogen Bulb in your instrument. We therefore recommend returning the indirect to its cradle or switching off at the control when not in use.

3.1 Cleaning

Should cleaning be required, disconnect the equipment from the electricity supply and wipe over with a soft, dry cloth. Do not use solvents for any cleaning purposes since these may cause damage.

CAUTION

Never immerse the Indirect Ophthalmoscope Power Supply unit in water or any other cleaning fluid.

If any part of the Indirect Ophthalmoscope Power Supply should become contaminated with biological agents, please contact Keeler Ltd direct for advice on decontamination procedures.

3.2 Maintenance

Routine maintenance is limited to visual inspection of the power module enclosure and interconnecting cables. Should any damage be observed to the enclosure of the plug-in power module or the supply cord of the Fison transformer, discontinue use of the power supply and contact your nearest authorised Keeler Distributor. Interconnecting cables are not replaceable by the purchaser and where repair is required the complete power supply should be returned to the place of purchase.

Servicing

There are no user-serviceable parts within the Indirect Ophthalmoscope Power Supply.

Technical Specifications

General

The Indirect Ophthalmoscope Power Supply units are class II, double insulated devices and are classified as Type B equipment in accordance with the degree of protection against electric shock.

Conditions of Use (104°F)	Temperature	:10°C (50°F) to 40°C
	Relative Humidity	: 30% to 75%
Conditions of Storage (158°F)	Temperature	:-20°C (-4°F) to 70°C
	Relative Humidity	: 10% to 100%

Note:

It is recommended that the Porta Power C should ***not*** be stored at temperatures below 0°C (32°F)

Fison Transformer *(and Vantage/All-Pupil in some regions)*

Power Module Dimensions 103 x 77 x 70mm (4.0 x 3.0 x 2.8 inches) Control Unit Dimensions 96.5 x 89 x 54mm (3.8 x 3.5 x 2.1 inches)

Length of Power Supply Cord	2m (6.6 ft)
Length of Interconnecting Cord	3m (9.8 ft)
Weight (Total)	1.415 kg (3.1 lb)
Input Voltage	100, 120, 220-240V

See rating plate for the nominal input voltage applicable to the particular transformer.

Input frequency 100V unit; 50/60 Hz

Technical Specifications

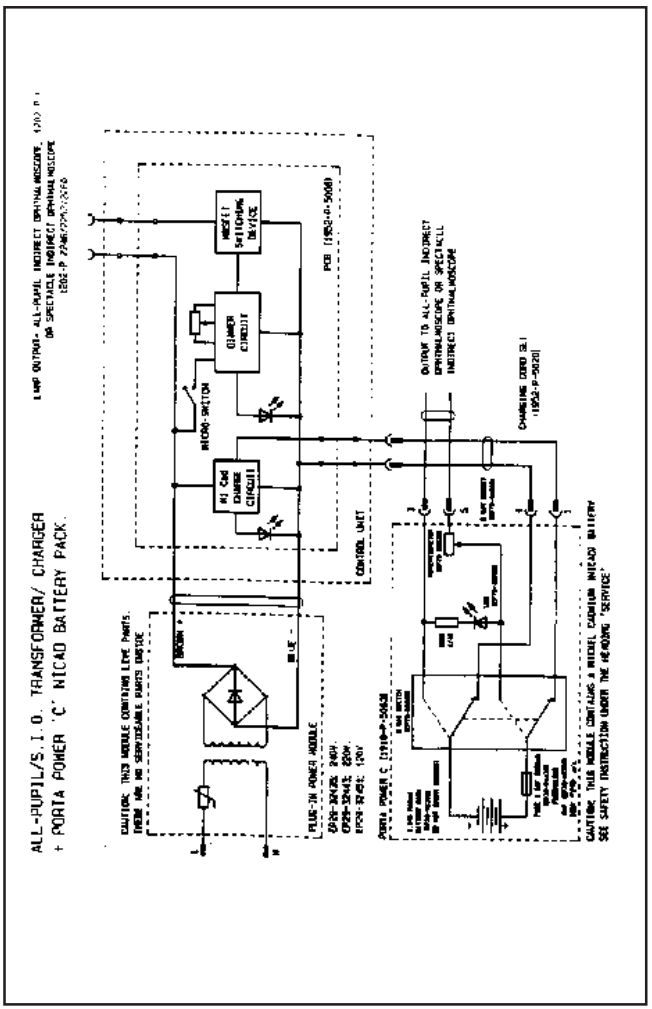
	120V unit; 60Hz
	220-240V units; 50Hz
Power Input	48VA
Output	6.8V, 3.2A

Vantage/All-Pupil/Spectacle Transformer/Charger

Power Module dimensions	96 x 63 x 58mm (3.8 x 2.5 x 2.3 inches)
Control Unit dimensions	87 x 89 x 54mm (3.4 x 3.5 x 2.1 inches)
Length of interconnecting Cord	3m (9.8ft)
Weight	0.766kg (1.7 lb)
Input Voltage	100, 120, 220-240V

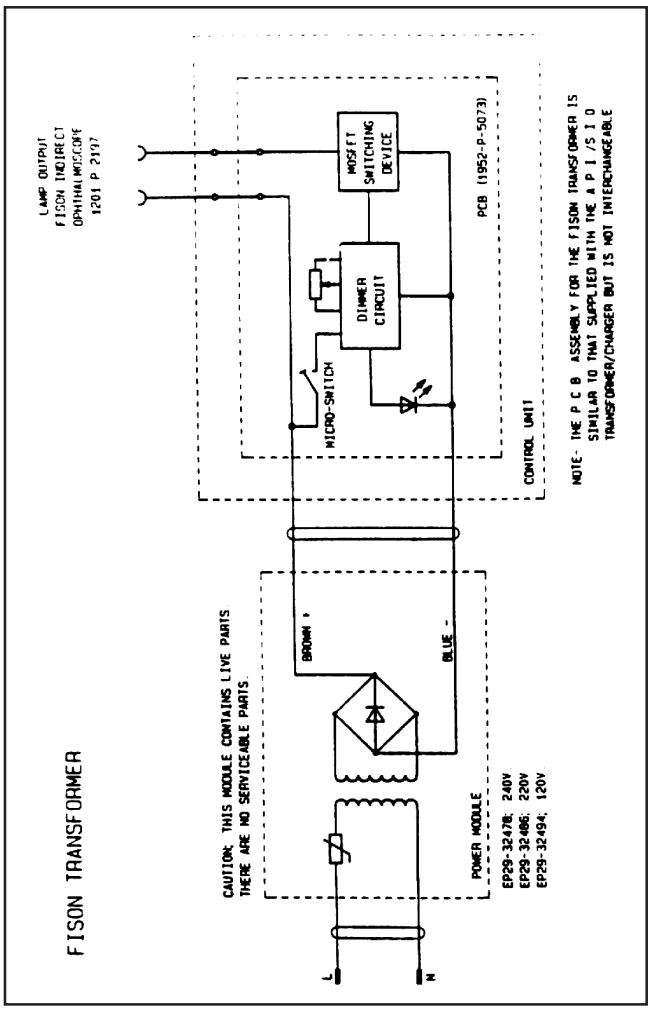
See rating plate for the nominal input voltage applicable to the particular transformer.

Input frequency	100V unit; 50/60Hz
	120V unit; 60Hz
	220 and 240V units; 50Hz
Power Input	25VA
Output	6V , 1.7A (Indirect Ophthalmoscope)
	7V dc, 100 mA
	(Indirect Ophthalmoscope Charging Output)



Circuit Diagram for all pupil /
Spectacle Indirect Power Supply

Fig 16



Circuit Diagram for Fison Indirect Power Supply

Fig 17

Upgrading your Indirect Ophthalmoscope Power Supply

All Indirect Ophthalmoscope Power Supplies have been designed to make upgrading simple and convenient. Check Fig 18 for the upgrade options available and how to order. For any upgrade option not illustrated please refer to your nearest authorised dealer or Keeler direct.

To upgrade your power supply, follow the arrow upwards from existing unit to desired enhancement level and note numbers alongside. Refer to list below for parts required.

When ordering a rechargeable battery for desk & wall units with hangers, item 8 must also be ordered. (API ,SIO & Vantage)

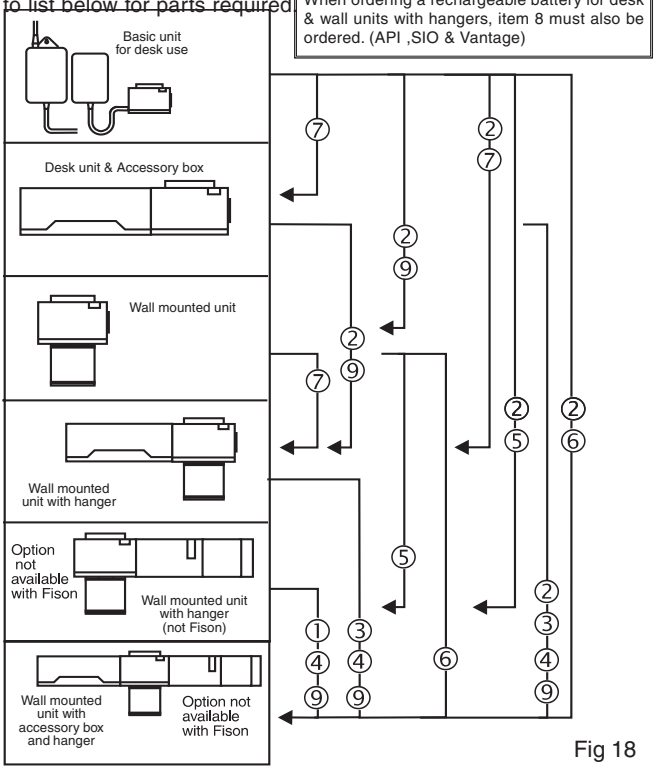

Basic unit for desk use
Desk unit & Accessory box
Wall mounted unit
Wall mounted unit with hanger
Option not available with Fison
Wall mounted unit with hanger (not Fison)
Wall mounted unit with accessory box and hanger
Option not available with Fison

Fig 18

① 1999-P-1002 Accessory Box Kit
② 1999-P-7113 Cradle Kit
③ 1999-P-7121 Battery Hanger
④ 1999-P-7199 Rail Kit - W6
⑤ 1999-P-7252 Hanger Ext. Kit
⑥ 1999-P-7260 Hanger & Accessory Box Kit.Ext
⑦ 1999-P-7279 Accessory Box Ext. Kit
⑧ 1952-P-5030 Charging Cord Set
⑨ 1999-P-1133 Wall Fixing Kit

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As part of our policy of continued product development we reserve the right to alter and/or amend specifications at any time without prior notice.

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The CE mark on this product indicates it has been tested to and conforms with the provisions noted within the 93/42/eec Medical Device Directive.

EP59-06400 ISSUE A DTP ref: (superceed 93-15) 96-13